

# Work Order ID 71645

Thursday, July 07, 2011 12:03:14 PM



Page 1

Item ID: D212-664-101TRN

Accept



Setup Start



Revision ID: U/R

Stop



Item Name: Crosstube Turning Detail

Start Date: 7/7/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 7/20/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: CL Date: 11/07/07 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D212-664-141	Rev D U/R OK <u>CP 11-07-07</u>

100	MORI SEIKI CNC LATHE LARGE	0.00							
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Mori Seiki	Memo	0.00							
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Mori Seiki CNC Lathe Large

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA113

2-Turn first side as per Folio FA113

3-Blend transition lines only, \*\*do not sand whole tube\*\*:  
\*Use mill bastard file, brush file repeatedly with file card.  
\*Do not use sandpaper coarser than 320 grit.

9mm.6 11/07/19

SL 11-07-25

110	QC1- Inspect dimensions to dimension sheet	0.00							
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QC	Memo	0.00							
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Quality Control

SL 11-07-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11-07-25	100	-cuff on one side of tube is under xld at one spot only 2.740 <sup>+0.05</sup> <sub>-0</sub> is 2.732	CP 11.08.09 BS/042	Acceptable,			CP 11.08.09 BS/042	

NOTE: Date & initial all entries

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Required Date: 7/20/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120  Mori Seiki	MORI SEIKI CNC LATHE LARGE	0.00							
Mori Seiki CNC Lathe Large	Memo 1-Turn second side as per Folio FA113  2-Blend transition lines only, **do not sand whole tube**: *Use mill bastard file, brush file repeatedly with file card. *Do not use sandpaper coarser than 320 grit.  3-Remove sand and plugs	0.00							<i>1 0</i>
130  QC	QC1- Inspect dimensions to dimension sheet	0.00							
Quality Control	Memo	0.00							<i>SL 11-07-25</i>
140  QC	QC8- Inspect parts - second check	0.00							
Quality Control	Memo	0.00							<i>JFS. 11/08/08</i> <i>SL 11-08-08</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 71645**

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Item ID: D212-664-101TRN

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Revision ID: U/R

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Item Name: Crosstube Turning Detail

Start Date: 7/7/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 7/20/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150

Crosstubes Chemical Conversion

0.00

SAD. 11-08-09

(1)



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

160

QC3- Inspect Part Finish

0.00

DP

11-8-9



QC

Memo

0.00

Quality Control

170

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and Stock in kanban rack  
Location: 416

DP

11-8-9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 71645**

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Item ID: D212-664-101TRN

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Revision ID: U/R

Item Name: Crosstube Turning Detail

Start Date: 7/7/2011 Start Qty: 1.00

Required Date: 7/20/2011 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180

QC21 - Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

CK 11/08/11

MF

11-08-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Page 1

Thursday, July 07, 2011 12:03:12 PM

Work Order ID: 71645



Parent Item: D212-664-101TRN



Parent Item Name: Crosstube Turning Detail


Start Date: 7/7/2011

Required Date: 7/20/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-03-06 new issue DD verified by:ec  
IPP Rev B 08.04.02 removed Polish EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6005-128 		Manufactured	No			120	Each	0.0000	1	1			

Crosstube Material

D6005-180

B59307

1 mm. L 11/07/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	71645
<b>Description:</b> Crosstube Assembly (205/212/412 High Fwd)		<b>Part Number:</b>	D212-664-141
<b>Inspection Dwg:</b> D212-664-141 <b>Rev:</b> D		<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

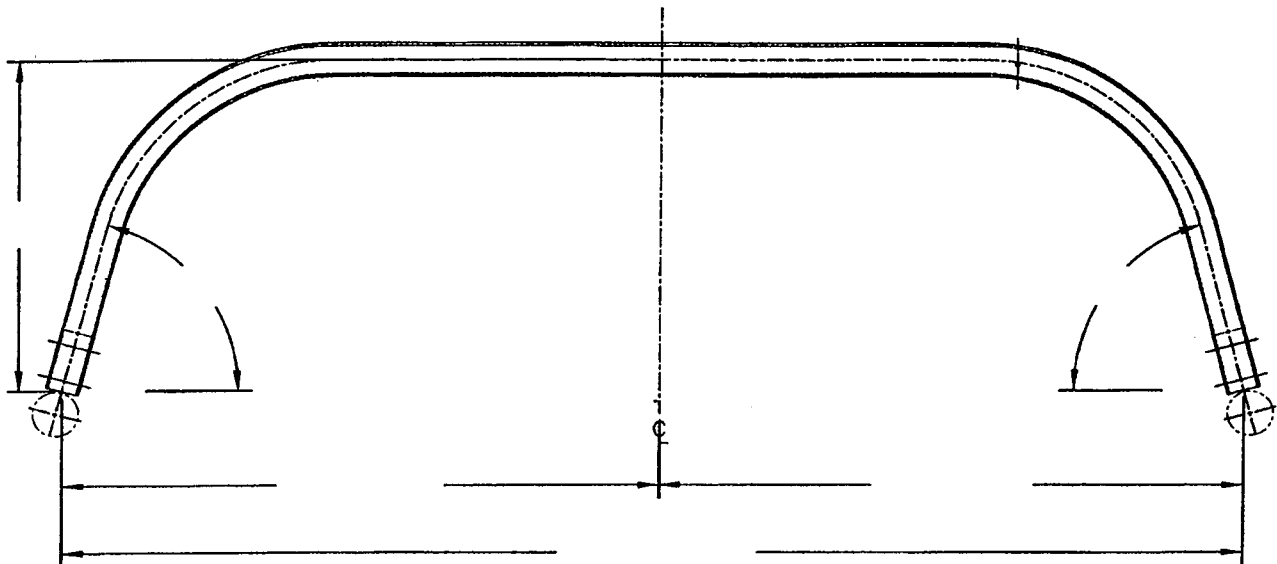
	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	0.200	+/-0.010	2.40	✓		vern	JA-01
	R0.063	+/-0.010	.063	✓		RG	
	2.740	+0.005/-0.000	2.743	✓		vern	JA-01
	5.097	+/-0.030	5.080	✓		"	
	2.304	+0.005/-0.000	2.308	✓		mic	CNC-04
	2.340	+0.005/-0.000	2.344	✓		"	
	2.398	+0.005/-0.000	2.402	✓		"	
	2.448	+0.005/-0.000	2.453	✓		"	
	2.498	+0.005/-0.000	2.503	✓		"	
	2.549	+0.005/-0.000	2.554	✓		"	
	2.599	+0.005/-0.000	2.603	✓		"	
	2.671	+0.005/-0.000	2.675	✓		"	
	2.701	+0.005/-0.000	2.706	✓		"	
SIDE B	0.200	+/-0.010	2.00	✓		vern	JA-01
	R0.063	+/-0.010	.063	✓		RG	
	2.740	+0.005/-0.000	2.743	✓		vern	JA-01
	5.097	+/-0.030	5.095	✓		"	
	2.304	+0.005/-0.000	2.308	✓		mic	CNC-04
	2.340	+0.005/-0.000	2.344	✓		"	
	2.398	+0.005/-0.000	2.403	✓		"	
	2.448	+0.005/-0.000	2.453	✓		"	
	2.498	+0.005/-0.000	2.503	✓		"	
	2.549	+0.005/-0.000	2.553	✓		"	
	2.599	+0.005/-0.000	2.604	✓		"	
	2.671	+0.005/-0.000	2.676	✓		"	
	2.701	+0.005/-0.000	2.706	✓		"	
	126.514	+/-0.020	126.520	✓		tape	mm. 1-02

<b>Measured by:</b> <i>AMM.L</i>	<b>Audited by:</b> <i>JL</i>	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 11/07/19	<b>Date:</b> 11-07-25	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue (P/O D412-664-101)	KJ/JLM	
B	06.03.15	Tolerance revised for 5.097 per Dwg Rev update	KJ/JLM	
C	07.05.28	Dwg Rev updated	KJ/JLM	
D	10.02.02	Dimension 126.514 was 126.51	KJ	

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	71645
<b>Description:</b> Crosstube High Fwd (205/212/412)		<b>Part Number:</b>	D212-664-101
<b>Inspection Dwg:</b> D212-664-141 <b>Rev:</b> D		<b>Page 1 of 1</b>	

Required Dimension	Min	Max
Height	26.79	27.05
1/2 Span	53.59	53.85
Angle	49	52
Total Span	107.18	107.7



Comments

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	07.05.31	Dimensions updated per Dwg Rev C	KJ/JM	
C	10.04.01	Dwg Rev updated	KJ	

